

**PHH-1X LITMUSTIK®**  
**pH Tester**  
**M1008/0592**

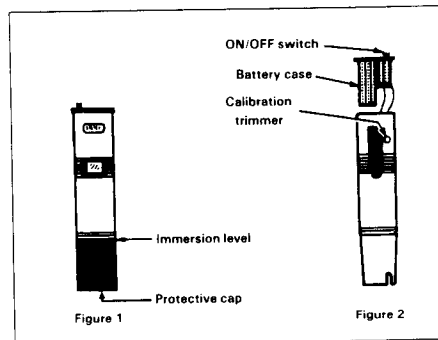


**GENERAL DESCRIPTION**

The OMEGA PHH-1X Litmustik® is an economical handheld unit small enough to fit in a pocket. This newly designed pH tester features large display numerics for easy reading, and single point calibration. Designed for fast evaluations in the field, this high performance tester measures the entire pH range from 0 to 14 pH units and offers better accuracy than test paper\*.

**OPERATING PROCEDURE**

1. Remove the black protective cap.
2. Turn on the PHH-1X with the ON/OFF switch located on top.
3. Condition the PHH-1X according to the conditioning instructions. Large error can occur if the pH bulb is dry.
4. Calibrate the PHH-1X in a pH buffer solution, close in pH value to the sample to be measured, by adjusting the CALIBRATION TRIMMER located on the reverse side. Refer to the calibration instructions.
5. Dip PHH-1X in solution up to immersion level. Under no circumstances immerse above immersion level. Refer to Figure 1.
6. Stir gently and wait a few seconds.
7. Large differences in readings of pH ( $\pm 0.5$  pH) could be due to dry electrode or run-down batteries. To improve performance, leave PHH-1X up to immersion level in tap water for a few minutes at least once a week.
8. To change batteries, pull out the battery case and replace batteries. Refer to Figure 2.
9. When not in use, switch off the instrument. To ensure optimum operation, electrode should be kept moist. If soaker pad in bottom of protective cap is dry, pour buffer 7.0 or 4.0 into cap to remoisten pad. If pad is missing simply add buffer 7.0 or 4.0 to cap. Replace protective cap.



\* As with all pH equipment, it is recommended that the unit be calibrated in buffer solution. For most applications buffer 7.0 should be used.

### CONDITIONING OF THE PHH-1X

Soak the sensing tip in either buffer 4, buffer 7, KCL solution or tap water for at least 30 minutes. Make sure that the sensing tip is immersed up to at least one inch from the tip. This procedure should be followed when unit is received or if the pH electrode is allowed to dry out. If unit is properly stored, this procedure is not necessary.

### CALIBRATION OF THE PHH-1X

After conditioning, the pH pen must be calibrated in a buffer solution close to the value of the sample to be measured. Calibration is performed by turning the CALIBRATION TRIMMER on the reverse side of the tester. The Litmustik® is designed for single point calibration only. For accurate measurements, periodic recalibration is recommended.

#### SPECIFICATIONS

RANGE:	0 to 14 pH
ACCURACY:	±0.2 pH, ±3 pH units from standardization point
RESOLUTION:	0.1 pH
OPERATING TEMPERATURE:	0 to 50°C
BATTERY LIFE:	1000 hours of continuous use, 4 × 1.5 V battery
DIMENSIONS:	5.9" L × 1.3" W × 0.6" D
WEIGHT:	0.13 lb.; 2.1 ounces

---

### OMEGA Engineering, Inc.

One Omega Drive, Box 4047, Stamford, CT 06907-0047 U.S.A.  
Headquarters: (203) 359-1660

Sales: 1-800-826-6342 / 1-800-TC-OMEGA

Customer Service: 1-800-622-2378 / 1-800-622-BEST

Engineering: 1-800-872-9436 / 1-800-USA-WHEN

FAX: (203) 359-7700 TELEX: 996404 EASYLINK: 62968934 CABLE: OMEGA

### OMEGA Technologies Ltd.

P.O. Box 1, Broughton Astley, Leicestershire  
LE9 6XR, England

Telephone: (0455) 285520 FAX: (0455) 283912

---

### RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA ENGINEERING Customer Service Department. Call toll free in the USA and Canada: 1-800-622-2378, FAX: 203-359-7811; International: 203-359-1660, FAX: 203-359-7807.

BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, YOU MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OUR CUSTOMER SERVICE DEPARTMENT. Please have the following information available BEFORE contacting OMEGA:

1. P.O. number under which the product was PURCHASED,
2. Model and serial number of product, and
3. Repair instructions and/or specific problems you are having with the product.

---

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. That way our customers get the latest in technology and engineering.

OMEGA is a registered trademark of OMEGA ENGINEERING, INC.

© Copyright 1992 OMEGA ENGINEERING, INC. All rights reserved including illustrations. Nothing in this manual may be reproduced in any manner, either wholly or in part for any purpose whatsoever without written permission from OMEGA ENGINEERING, INC.

Printed in U.S.A.